

## **REMARKS/ARGUMENTS**

The non-Final Office Action of April 15, 2004 has been fully considered by the Applicants. In view of the following discussion, Applicants submit that claims 1-24 are in condition for allowance. Applicants respectfully request that the Examiner withdraw the rejections and allow claims 1-24.

### **A. Status of the Claims**

Claims 1-15 stand rejected. Claims 1-2, 7 and 11-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,801,337 to Higgins. Claims 3-6 and 8-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Higgins in view of U.S. Patent No. 4,578,122 to Crotty.

The Examiner withdrew prior rejections under 35 U.S.C. §102(b) in view of Crotty and in view of Higgins. The Examiner stated that the current rejections under §103(a) in view of Higgins and Higgins in view of Crotty are under new grounds.

The Examiner allowed claims 16-24.

### **B. Amendments to Claims 1, 11, and 14**

Claims 1 and 11 are amended herein. The amendments do not change the substance of the claims in any manner. The amendments were made to clarify the language and grammar of the claims and are not made for reasons related to patentability.

Claim 14 is amended herein to clarify the claim in view of previous amendments. Specifically, claim 14 is amended to clarify that it is the step of exposing the article to the conversion coating that is performed for about 25-75 seconds. This amendment is made for reasons unrelated to patentability.

### **C. Claims 1-2, 7 and 11-15 Are Patentable Over Higgins**

The Examiner rejected claims 1-2, 7 and 11-15 under 35 U.S.C. §103(a) as being unpatentable over the '337 patent to Higgins. The Examiner contends that Higgins teaches a mole ratio of nitrate to chromium plus cobalt that overlaps the ratio claimed in independent claims 1, 11 and 12. The Examiner also contends that Higgins teaches chromium, cobalt and nitrate concentrations that overlaps those set forth in instant claims 7 and 15, and processing parameters set forth in claims 13 and 14. Applicants traverse.

Claims 1-2, 7 and 11-15 are not obvious in view of Higgins. Higgins does not teach or suggest a nitrate to chromium plus cobalt ratio of less than 1.5:1. Example 1 in Higgins, upon which the Examiner relies, does not teach or show a mole ratio of nitrate to chromium plus cobalt ions of 1.5:1. A calculation of the mole ratio of nitrate to chromium plus cobalt in Example 1 of Higgins shows a ratio of 2.1:1, which is outside the claimed ratio of less than 1.5:1. There is no other teaching or suggestion in Higgins of a mole ratio of nitrate to chromium plus cobalt of 1.5:1.

There is no teaching or suggestion in Higgins to motivate one skilled in the art to modify Higgins to arrive at the claimed invention. First, Higgins does not teach any specific nitrate ranges. Contrary to the Examiner's assertion, Higgins does not teach that the nitrate ions are present in an amount corresponding to the metal ion source. Higgins only teaches that the metals may be introduced as nitrate salts. If the metal is added as a nitrate salt, the amount of nitrate ion in the solution is based upon the stoichiometric relationship of the nitrate to the metal. For example, in Example 1 of Higgins, cobalt is present in an amount of 0.2 grams per liter added as the nitrate salt. This corresponds to a nitrate ion concentration of 0.42 grams per liter. Thus, the nitrate ion does not correspond to the concentration of metal ion.

Second, and more importantly, Higgins does not recognize the presence of either nitrate or the ratio of nitrate to chromium plus cobalt as important components. Applicants respectfully submit the Examiner is essentially arguing that a person skilled in the art could optimize the values of chromium and cobalt taught by Higgins to arrive at the claimed nitrate concentrations or nitrate to chromium plus cobalt ratio. The Examiner argues that the ratio of nitrate to chromium plus cobalt would be obvious because Higgins teaches that the anion for chromium and cobalt may be nitrate or other suitable inorganic acid salts. The phrase "introduced as nitrate or other suitable inorganic acid salt" in Higgins teaches that nitrate does not have to be added to the compositions in Higgins. Thus, Higgins fails to teach or suggest the importance of either nitrate or the ratio of nitrate to chromium plus cobalt such that a person skilled in the art would be motivated to modify Higgins to arrive at the present invention other than through hindsight in view of the present disclosure.

Applicants submit that claims 1-2, 7, and 11-15 are allowable. For at least these reasons, claims 1-2, 7, and 11-15 are not obvious in view of Higgins. Applicants respectfully request that the rejection of claims 1-2, 7, and 11-15 be withdrawn.

**D. Claims 3-6 and 8-10 Are Not Obvious In View of Higgins In View of Crotty**

The Examiner rejected claims 3-6 and 8-10 under 35 U.S.C. §103(a) as being unpatentable over Higgins in view of Crotty. The Examiner contends that a person skilled in the art would have been motivated to add certain additives disclosed in Crotty to the composition disclosed in Higgins. Applicants traverse.

First, the combination of Higgins and Crotty fails to disclose each and every limitation of the claims. In particular, neither Higgins nor Crotty, alone or in combination, teaches a conversion coating bath concentrate or method with a coating composition comprising a ratio of nitrate ions to the combination of chromium and cobalt ions of less than 1.5:1. Further, the references fail to motivate a person skilled in the art to modify their respective teachings to arrive at all the claim limitations. Thus, these references cannot be used to establish a prima facie case of obviousness of claims 3-6 and 8-10.

Second, there is no motivation to combine Higgins and Crotty. Specifically, a person skilled in the art would not be motivated to modify the composition in Higgins using the teachings of Crotty. As previously stated, neither Higgins nor Crotty teaches or suggests a coating composition that includes a mole ratio of nitrate to chromium plus cobalt of 1.5:1. Even assuming Higgins and Crotty teach that all aspects of the claims at issue were individually known in the art, this is not a sufficient basis to establish a prima facie case of obviousness. There must be some reason to combine the teachings. Here, there is simply no such motive or reason to combine the teachings of Higgins and Crotty. In particular, the Examiner's proposed modification of Higgins with Crotty would render the composition of Higgins unsatisfactory for its intended purpose or change the principal of operation of Higgins. Specifically, Higgins teaches that its bath must operate at a pH greater than 11. Reducing the pH of Higgins below 11 would render the Higgins composition unsatisfactory for its intended purpose. A person skilled in the art would not be motivated to combine these references and modify Higgins with Crotty. For at least these reasons, Applicants respectfully submit that claims 3-6 and 8-10 are not obvious in view of the combination of Higgins and Crotty. Applicants submit that claims 3-6 and 8-10 are allowable. Applicants respectfully request that the Examiner withdraw the rejection.

**E. New Claims 25-27 Define Patentable Subject Matter**

New claims 25, 26, and 27 are added herein and are dependent from claims 1, 8, and 12, respectively. Applicants submit that claims 25, 26, and 27 recite patentable subject matter because they are dependent from independent claims that are neither anticipated by nor obvious in view of the cited references. Applicants further submit that claims 25, 26, and 27 are patentable over Higgins, either alone or in combination with the other references cited by the Examiner, because Higgins is not directed to an acidic coating composition.

For at least these reasons, Applicants submit that claims 25, 26, and 27 recite patentable subject matter and are in condition for allowance.

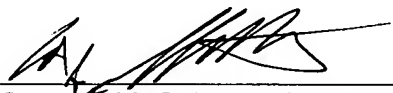
**CONCLUSION**

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the rejections of claims 1-15. Applicants submit that, along with claims 16-24, claims 1-15 are in condition for allowance. Applicants respectfully request that a Notice of Allowance be issued.

Respectfully submitted,

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July 15, 2004  
Date

  
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**CERTIFICATE OF MAIL**

I hereby certify that this AMENDMENT is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on July 15, 2004.

  
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Georgeen B. Sonntag

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